Accelerating the Pace of Chemical Risk Assessments Workshop
September 14 – 15, 2016
US Environmental Protection Agency
Washington, DC

Biosketches

Michael A. Babich, US Consumer Product Safety Commission, USA

Dr. Michael Babich is the Director of the Division of Toxicology and Risk Assessment at the US Consumer Product Safety Commission (CPSC). He previously served as a staff scientist at CPSC, where he was the principal author of numerous CPSC risk assessments involving chronic hazards associated with consumer products, including flame retardant chemicals in upholstered furniture and diisononylphthalate in children's products. He has managed numerous regulatory and research projects, including the CPSC chronic hazard risk assessment guidelines, the Chronic Hazard Advisory Panel (CHAP) on phthalates, and coordinated the agency's Chemical Hazards Program for 9 years. This work contributed to the development of six federal regulations, four national voluntary standards, and the CPSC risk assessment guidelines. Prior to joining CPSC, Dr. Babich was engaged in basic research in the field of carcinogenesis, mutagenesis, and DNA repair. Dr. Babich received postdoctoral training at the University of Rochester Medical Center and the National Cancer Institute (NCI), National Institutes of Health (NIH). He previously worked as a Research Associate at the Armed Forces Radiobiology Research Institute (AFRRI).

Tina Bahadori, US Environmental Protection Agency, USA

Dr. Tina Bahadori is the National Program Director for Chemical Safety for Sustainability (CSS) at US EPA. CSS research advances sustainable development, use and assessment of existing chemicals and emerging materials by developing and applying computational science, integrated chemical evaluation strategies, and decision-support tools. Before joining US EPA in May 2012, she was the Managing Director of the Long-Range Research Initiative at the American Chemistry Council (ACC). Dr. Bahadori is a past president of the International Society of Exposure Science and was an associate editor of the Journal of Exposure Science and Environmental Epidemiology. She is currently a member of the National Academy of Sciences (NAS) Chemical Sciences Roundtable and an Agency Liaison to the Committee on Emerging Science for Environmental Health Decisions. In the past, she has served as a member of several NAS committees, including one on exposure science in the 21st Century. She has served as a member of the Board of Scientific Counselors for the Centers for Disease Control and Prevention National Center for Environmental Health - Agency for Toxic Substances and Disease Registry. Dr. Bahadori has a Ph.D. in environmental science and engineering from the Harvard School of Public Health. From the Massachusetts Institute of Technology, she has a M.S. in chemical engineering and technology and policy, as well as B.S. degrees in chemical engineering and in humanities.

Stan Barone, US Environmental Protection Agency, USA

Dr. Stan Barone is the acting Director of the US EPA Office of Science Coordination and Policy, which oversees FACA (Federal Advisory Committees Act) committees reviewing products from the Office of Chemical Safety and Pollution Prevention (OCSPP) and houses the Endocrine Disruptor Screening program. Dr. Barone's experience in cell biology and development and application of *in vitro* methods to address hazards of chemicals is currently being put to use in developing new assessment approaches for assuring the safety of chemicals. He came to US EPA in 1990 as a Principal Investigator in developmental neurotoxicology in the National Health and Environmental Effect Research Lab in the Office of Research and Development (ORD). From 2006–2012, Dr. Barone was Assistant Center Director for Human Health Risk Assessment at the National Center for Environmental Assessment in ORD and National Program Director for Human Health Risk Assessment Program. Before moving to his current position, Dr. Barone served as the Deputy Director of the Risk Assessment Division of the Office of Pollution Prevention and Toxics in OCSPP. He has published over 75 peer reviewed papers, technical reports, and book chapters, and has served on peer review panels for numerous government and nongovernmental funding organizations. Dr. Barone has a M.S. in endocrinology (1985) and Ph.D. (1990) in neurobiology from East Carolina University School of Medicine.

Tara Barton-Maclaren, Health Canada, Canada

Dr. Tara Barton-Maclaren is a Risk Assessment Division Manager in the Existing Substances Risk Assessment Bureau, Healthy Environments and Consumer Safety Branch of Health Canada since 2012. As the focal point for hazard assessment expertise in the Bureau, the division follows advancements in toxicology and risk assessment and works toward the development of strategies for the integration of emerging data and novel methodologies for the assessment of chemicals existing in the Canadian marketplace. In support of the global transition to 21st Century toxicology, she participates in initiatives under the Organization for Economic Cooperation and Development (OECD) and engages in various scientific collaborations both nationally and internationally in the areas of QSAR, adverse outcome pathways, Integrated Approaches to Testing and Assessment (IATA), and new approaches to support regulatory decision-making.

Dr. Barton-Maclaren joined Health Canada in the Existing Substances Risk Assessment Bureau in 2007 and has led various risk assessment files as well as hazard methodology initiatives. She obtained her B.Sc. Honours from the University of Guelph with a specialization in biomedical science and her Ph.D. in reproductive toxicology from McGill University, Montreal, Quebec.

John R. Bucher, National Toxicology Program, USA

Dr. John Bucher is the Associate Director of the National Toxicology Program (NTP), and Director of the Division of the National Toxicology Program at National Institutes of Health (NIH). He is responsible for oversight of NTP toxicology and carcinogenesis studies, the NTP Report on Carcinogens, NTP Office of Health Assessment and Translation and for administrative support for the alternative animal assay validation program of the Interagency Coordinating Committee on the Validation of Alternative Methods. His research interests include characterization of the toxic and carcinogenic potential of a variety of chemicals, mixtures and physical agents of interest to the National Toxicology Program, and issues related to the improvement of research tools and assays for these purposes. Dr. Bucher's other interests include development of initiatives examining the genetic and epigenetic bases for variations in response to environmental agents, and incorporation of Tox21 and systematic review in environmental health sciences. Dr. Bucher received a B.A. in biology from Knox College, a M.S. in biochemistry from the University of North Carolina, and a Ph.D. in pharmacology from the University of Iowa. He was a NIH Postdoctoral Fellow in biochemistry and environmental toxicology at Michigan State University, and is currently a diplomate of the American Board of Toxicology and a Collegium Ramazzini Fellow.

Thomas Burke, US Environmental Protection Agency, USA

Dr. Thomas Burke is the Deputy Assistant Administrator of US EPA's Office of Research and Development (ORD) as well as US EPA's Science Advisor. Dr. Burke served as the Jacob I. and Irene B. Fabrikant Professor and Chair in Health, Risk and Society and the Associate Dean for Public Health Practice and Training at the Johns Hopkins Bloomberg School of Public Health before coming to US EPA. He was also a Professor in the Department of Health Policy and Management, with joint appointments in the Department of Environmental Health Sciences and the School of Medicine Department of Oncology. Additionally, he was the founder of and served as the Director of the Johns Hopkins Risk Sciences and Public Policy Institute. His research includes the development of new approaches to environmental health risk assessment and environmental health surveillance, and their applications to environmental health policy. Before his time at Johns Hopkins, Dr. Burke was Deputy Commissioner of Health for the State of New Jersey and Director of the Office of Science and Research in the New Jersey Department of Environmental Protection. In New Jersey, he directed initiatives that influenced the development of national programs, such as Superfund, the Safe Drinking Water Act, and the Toxics Release Inventory. Dr. Burke also served on US EPA's Science Advisory Board, as well as advisory boards

for the Centers for Disease Control and Prevention, and on various committees for the National Academy of Sciences (NAS). Dr. Burke chaired the NAS committee that wrote the "Science and Decisions: Advancing Risk Assessment" report. The report, commonly known as the Silver Book, examines some of the greatest challenges to the country's assessment, management, and communication of environmental risks. He received his Ph.D. in epidemiology from the University of Pennsylvania, his M.P.H. from the University of Texas, and his B.S. from Saint Peter's College.

Warren Casey, National Toxicology Program, USA

Dr. Warren Casey is the Director of National Toxicology Program Interagency Center for the Evaluation of Alternative Toxicological Methods (NICEATM). NICEATM supports the Interagency Coordinating Committee on the Validation of Alternative Methods (ICCVAM) by facilitating the development, validation, and regulatory acceptance of non-animal test methods. Prior to assuming his current position, Dr. Casey served as Deputy Director of NICEATM and also worked at GlaxoSmithKline for 15 years in a variety of roles, including: Manager of Pharmaceutical Microbiology; Head of *In Vitro* Biomarker Development; and Manager of Discovery and Investigative Toxicology. Dr. Casey received his undergraduate degree in biochemistry and his Ph.D. in microbiology from North Carolina State University, where he has been named a Distinguished Alumnus and also holds an adjunct professorship in the Department of Microbiology. He has been a Diplomate of the American Board of Toxicology (DABT) since 2007, received the 2016 Society of Toxicology Animal Welfare Award, and currently serves as the Vice President of the SOT *In Vitro* and Alternative Methods Specialty Section and Co-Chair of the OECD Validation Management Group – Non Animal.

Daniel Chang, US Environmental Protection Agency, USA

Dr. Daniel T. Chang received his Ph.D. in chemical physics with an emphasis on *ab initio* quantum mechanics, solvation and kinetic rate theory. For 9 years, Dr. Chang was a Principal Investigator at the US EPA's National Exposure Research Laboratory applying, and developing structure-based computational chemistry methods for metabolism, exposure, and high throughput screening models used in chemical exposure assessments. In his previous position at Chemical Computing Group, he collaborated, developed, and applied ADME-based cheminformatics and structure-based methods for use in drug discovery and biotechnology design and formulation research. Currently, he is employed as a computational chemist in the Risk Assessment Division of US EPA's Office of Pollution Prevention and Toxics working to enhance the infrastructure for existing and new chemical programs with state-of-the-science *in silico*-based alternative testing methods.

Peiying Chuan, Agency for Science, Technology and Research, Singapore

Dr. Peiying Chuan is Assistant Head at the Food, Nutrition, and Consumer Care (FNCC) Cluster in the Biomedical Research Council of Singapore's Agency for Science, Technology and Research (A*STAR). FNCC develops and drives strategies to build a broad base of industry-relevant R&D capabilities and infrastructure to anchor long-term partnerships with companies. Dr. Chuan manages the 21st Century Testing for Safety and Efficacy (21CT) program that FNCC is in the initial stages of building to help advance safety science and health research with innovative, non-animal tools. 21CT has potential relevance to a broad range of industries including food and nutrition, specialty chemicals, pharma, and consumer care. Before joining the FNCC cluster, Dr. Chuan spent two years at the Joint Council Office, where she was part of a team that fostered inter-disciplinary research across A*STAR's 18 research institutes in life sciences, chemical sciences, engineering, and computational sciences. Dr. Chuan received her B.Sc. in bioengineering from the University of Pennsylvania, and her Ph.D. in biochemistry from Stanford University, where she used a carbon fibre single-cell stretching technique to study cardiomyocyte contractility, as well as single-molecule microscopy and laser trapping techniques on

non-muscle myosins. Dr. Chuan spent two years as a postdoctoral fellow at the Microfluidics Systems Biology laboratory at A*STAR's Institute for Molecular and Cell Biology.

Vincent Cogliano, US Environmental Protection Agency, USA

Dr. Vince Cogliano serves as acting Director of the Integrated Risk Information System (IRIS) Program at the US EPA in Washington DC. IRIS develops scientific reviews of the health hazards of chemicals in the environment. Previously, Dr. Cogliano served as head of the *IARC Monographs* programme at the International Agency for Research on Cancer (part of the World Health Organization) in Lyon, France. The *IARC Monographs* are a series of scientific reviews that identify environmental factors that can increase the risk of human cancer. Dr. Cogliano received his Ph.D. from Cornell University. Professional interests include qualitative and quantitative health risk assessment and its application to the protection of public health.

Kacee Deener, US Environmental Protection Agency, USA

Ms. Kacee Deener is a Senior Science Advisor in US EPA's Office of Research and Development (ORD) where she provides science and policy support and advice to the Deputy Assistant Administrator of ORD, who also serves as the Agency's Science Advisor. Prior to this, Ms. Deener served as the Director of the Communications and Regulatory Support Team for US EPA's National Center for Environmental Assessment (NCEA). In this role, she managed communications, outreach, and stakeholder engagement for NCEA, including the high visibility Integrated Risk Information System (IRIS) Program, and provided advice on science and science policy issues related to NCEA's involvement in regulatory activities. Ms. Deener has also served as the Assistant Center Director for Human Health Research in US EPA's National Center for Environmental Research (NCER), overseeing the development and implementation of NCER's human health research, including children's environmental health, biomarkers, environmental public health outcomes, and exposure science. In 2014, she completed a one-year stint at the White House Council on Environmental Quality as the Deputy Associate Director for Chemicals and Public Health, and in 2005, she was the recipient of a Brookings Institution Congressional LEGIS Fellowship where she served in the office of US Rep. Ron Kind covering environmental and reproductive health and science and technology policy. Prior to joining US EPA in 2001, Ms. Deener was a Senior Environmental Analyst for Alcoa where she worked on environmental compliance activities. Ms. Deener holds an M.P.H, with specialization in environmental health, the risk sciences, and public policy, from the Johns Hopkins Bloomberg School of Public Health. She also holds B.S. degrees in chemistry and French.

Robert Diderich, Organisation for Economic Cooperation and Development, European Union

Mr. Robert Diderich has been involved in environmental hazard and risk assessment of chemical substances since 1992, when he joined the German Federal Environmental Agency. He was working in France between 1995 and 2002, first for the French Ministry of the Environment and then the French National Institute for Industrial Environment and Risks, where he assessed the environmental risks of industrial chemicals and biocides. In 2002 he joined the Organisation for Economic Co-operation and Development where he was in charge of the OECD Cooperative Chemicals Assessment Programme and the OECD Project on (Quantitative) Structure Activity Relationships. Since 2012, Mr. Diderich is the head of the Environment, Health and Safety Division.

Jean-Lou Dorne, European Food Safety Agency, European Union

Mr. Jean-Lou Dorne is a Senior Scientific Officer in the Scientific Committee and Emerging Risks Unit for the European Food Safety Agency (EFSA). From 2001–2006 was a Senior Research Fellow in toxicology at the University of Southampton, School of Medicine.

Lynn Flowers, US Environmental Protection Agency, USA

Dr. Lynn Flowers is currently the acting Senior Science Advisor in the Office of Science Policy/Office of Research and Development at US EPA. She was previously the Associate Director for Health at the National Center for Environmental Assessment (NCEA). Her work has focused on the characterization of the human health effects of environmental chemical exposure. She began working at NCEA in 2000 in the IRIS Program after working at US EPA Region 3 as a toxicologist in the Superfund Program. Prior to joining US EPA, she was a research associate at the University of Pennsylvania where she characterized a novel mode of action of carcinogenesis for PAHs involving the formation of semi-quinone radicals and resultant oxidative stress. Lynn received a B.S. in chemistry and Ph.D. in medicinal chemistry from West Virginia University. She has been Board Certified by the American Board of Toxicology since 1998.

Jer-Pei Fong, Safety and Health Technology Center, Taiwan

Dr. Jer-Pei Fong currently serves as an industrial hygienist and database analyst/programmer for the Safety and Health Technology Center in Taiwan. He is currently working on environmental and occupational medicine and IT tool/database development. His research interests include exposure assessment, biological monitoring and epidemiologic studies on endocrine disruptors (BPA, NP, phthalates). Dr. Fong directs the potentially harmful evaluation and management strategy of tobacco product ingredients in Taiwan, a national program customized for toxicology studies on health effects, consumer behavior assessment, and tobacco control policy suggestion. He is also developing the chemical database and IT tool for screening the high risk chemicals that operate in specific workplaces or industries, a specialized program funded by the Taiwan Occupational Safety and Health Act (OSHA) and Environmental Protection Agency. He has experience in organizing, writing, and presenting research findings for publication and at international conferences, both individually and on research teams. Dr. Fong has a Ph.D. in environmental and occupational medicine and epidemiology.

Matthew Gagné, Health Canada, Canada

Mr. Matthew Gagné is a Senior Chemical Evaluator in the Existing Substances Risk Assessment Bureau, within the Healthy Environments and Consumer Safety Branch at Health Canada. Since 2009, Mr. Gagné has been providing expertise in integrating QSAR and read across into prioritization exercises and risk assessments for existing substances under Canada's Chemicals Management Plan. Mr. Gagné also has experience incorporating new approach methodologies, including the use of toxicogenomics, to support grouping and read across for the cumulative risk assessment of phthalates. He represents Health Canada on the Organisation for Economic Cooperation and Development (OECD) Integrated Approaches to Testing and Assessment (IATA) case studies project.

Maureen Gwinn, US Environmental Protection Agency, USA

Dr. Maureen Gwinn has been with the US EPA since 2006 and is currently a Science Associate in the Immediate Office of the Assistant Administrator (IOAA) in the Office of Research and Development (ORD). Previously, Dr. Gwinn worked in the National Center for Environmental Assessment (NCEA) in ORD, where she worked on human health hazard assessments for the Integrated Risk Information System (IRIS) program, with a focus on better understanding the toxicity related to particles and fibers. During this time, she has worked on issues related to the risk assessment of nanomaterials, particularly related to the validation of toxicity testing for a variety of nanomaterials. She has worked closely with US Federal partners as well as internation al collaborators in this area. While in NCEA, Dr. Gwinn worked as the Associate Program Director for Community Health for the Sustainable and Healthy Communities (SHC) National Program in ORD. In this role, she managed the community public health, children's health and environmental justice research component of SHC. From 2001–2006, Dr. Gwinn conducted postdoctoral research on genetic polymorphisms related to cancer and toxicology in both an *in vitro*

primary cell strain model as well as in a transgenic mouse model at the National Institute for Occupational Safety and Health (NIOSH), Centers for Disease Control and Prevention (CDC) in Morgantown, WV. Dr. Gwinn earned her B.S. degree in biology at Bates College and her M.S. and Ph.D. in oral biology at the State University of New York. Dr. Gwinn became a diplomate of the American Board of Toxicology in 2007 and a Fellow of the Academy of Toxicological Sciences in 2014.

Tala Henry, US Environmental Protection Agency, USA

Dr. Tala Henry has been with the US EPA for 20+ years. She is currently Director of the Risk Assessment Division in the Office of Pollution Prevention and Toxics where she leads several Agency programs under the Toxic Substances Control Act that assess the health and environmental hazards, exposures and risks of microorganisms and applications of biotechnology and new and existing chemicals, many of which are data-limited and therefore require application of multiple and evolving approaches to safety assessment. Much of Dr. Henry's professional experience with US EPA has been as a Toxicologist. She has worked in a variety of programs at the US EPA including conducting research on the toxicity of chemicals, conducting risk assessments for hazardous waste sites, and developing Water Quality Criteria. Dr. Henry has also served as the United States representative and technical expert for a number of international chemical assessment and management activities; relevantly the OECD QSAR Management Group and Task Force on Hazard Assessment. Dr. Tala Henry received a B.A. in biology from the College of St. Scholastica, and a Ph.D. in pharmacology from the University of Minnesota and completed a Post-Doctoral Fellowship at the University of Wisconsin-Madison.

Masashi Horie, National Institute of Technology and Evaluation, Japan

Mr. Masashi Horie is the Chief of the Risk Analysis Division, in the National Institute of Technology and Evaluation (NITE)'s Chemical Management Center. He has served in this position since he began his career in 2010. Mr. Horie has worked on management chemical reporting and emission estimation for screening assessment under Chemical Substances Control Law (CSCL). Also, Mr. Horie has served in International Affairs and Planning Office and Chemical Management System Development, Planning Division, and Chemical Nomenclature Office, Safety Assessment Division since 2015. As the chief of International Affairs and Planning Office, Mr. Horie is engaged in OECD Task Force on Hazard Assessment and Exposure Assessment and has relationships with Asian countries. As the chief of Chemical Management System Development, Mr. Horie is trying to revise the report system of manufactured and/or imported amount and Japanese Use Category under CSCL. Mr. Horie was at US EPA's Office of Pollution Prevention and Toxics as a visiting scholar from 2013-2015. Masashi was engaged in several projects, TSCA Work Plan Updates, and making rules under the section 6 of TSCA, and OECD WPMN. Mr. Horie has a B.S. and M.S. in agricultural chemistry from Kyoto prefectural University.

Philippe Hubert, National Institute for Industrial Environment and Risks, France

Mr. Philippe Hubert has been Director of the Chronic Risk Division at the National Institute for Industrial Environment and Risks (INERIS) since 2003. The Institute is in charge of research and expertise in the area of industrial risk. The Division performs experimental work and develops models (PBPK, QSAR) and methods in toxicology, ecotoxicology, addressing regulatory concepts as well as emerging risk (nanos; EMF, EDs). It develops tools and practices for chemical analysis of pollutants and environmental monitoring, and is in charge of pollution forecasting and data management in the field in connection with air and water. It conducts risk assessments both for substances and for industrial objects. From 2001 to 2002, Mr. Hubert was Advisor to the Minister of the Environment. From 1991 to 2001, he was head of the department for Risk Assessment and Management of the Institute for Nuclear Protection and Safety. He was in charge of three laboratories dealing respectively with radiation epidemiology, impact assessment of nuclear activities on workers and on the public, and risk perception. Research

activities were conducted in those fields together to provide support to the authorities. From 1979 to 1990, he was in the research team (INSERM U 240), that developed methodologies for risk assessment in France as regards low dose risk assessment, and probabilistic risk assessment. He was trained in statistics at ENSAE (Ecole Nationale Supérieure des Statistiques et de l'Administration Economique) after graduating from the Ecole Polytechnique in Paris. Mr. Hubert belongs to the Comité de Prévention et de Précaution and to the Commission for Chemical Products and Biocides. He is the director of the Association for Alternative Methods in Animal Experiments, and is Vice President of ECOPA (European Consensus-Platform for Alternatives).

Taisen Iguchi, Ministry of Environment, Japan

Dr. Taisen Iguchi is a Professor Emeritus at the National Institute for Basic Biology, a Visiting Professor at Yokohama City University and the Medical University of South Carolina, and an Honorary Professor at the University of Exeter. Dr. Iguchi has been leading the Japan side of the UK-Japan Research Collaboration on the Endocrine Disruptors for 16 years and US-Japan Bilateral Collaboration: Sharing of Scientific Expertise for Advancing New Test Method Development for 12 years. He has been helping Ministry of the Environment, Japan, and participating in the OECD VMGeco, EDTA, WNT etc. since 1997. His is also working on the environmental sex determination of water fleas, temperature-dependent sex determination of alligators and turtles, establishment of transgenic medaka with spigg in gene for screening of androgenic chemicals and transgenic medaka with choriogenin-gfp medaka for screening estrogenic chemicals, evolution of estrogen and androgen receptors, establishment of estrogen receptor and androgen receptor knockout medaka, and perinatal effects of estrogens on mouse genital tracts.

Jim Jones, US Environmental Protection Agency, USA

President Obama nominated Dr. Jim Jones to be the Assistant Administrator for US EPA's Office of Chemical Safety and Pollution Prevention (OCSPP) in January 2012. Dr. Jones was confirmed by the US Senate August 1, 2013. He is responsible for managing the office which implements the nation's pesticide, toxic chemical, and pollution prevention laws. The office has an annual budget of over $234 million and more than 1,100 employees. Dr. Jones' career with US EPA spans more than 29 years. He has an M.A. from the University of California at Santa Barbara and a B.A. from the University of Maryland, both in economics.

Jun Kanno, Ministry of Health, Welfare and Labour, Japan

Dr. Jun Kanno is the Director of the Japan Bioassay Research Center at the Japan Organization of Occupational Health and Safety. From 1986, Dr. Kanno served on the faculty at Tokyo Medical and Dental University, and was a Visiting Scientist of NIEHS (1991–1993). In 1997, he moved to National Institute of Health Sciences (NIHS) as a Section Chief, and from 2002 as the Head of the Division of Cellular and Molecular Toxicology, specializing in general and experimental pathology, and experimental toxicology. His research includes molecular toxicology focused on "signal toxicity" mainly of endocrine and central nervous system, carcinogenesis, toxicogenomics, nanomaterial toxicity, and other newly emerging issues. He has been a council member of the Japanese Society of Toxicology (JSOT) since 2002, on its Board of Directors (2004-2009), and its President (2012-2013). He has been an expert member of the World Health Organization/International Programme on Chemical Safety Toxicogenomics Harmonization Project on Cancer (2003-), OECD EDTA VMG-mammalian (1998-), VMG-Non Animal (2002-), and engaged as a member of the EDTA Advisory Group (2009-). He joined IUTOX Executive Committee as Vice President (2009-2013) and as the President-Elect (2013-2015). Dr. Kanno received his Ph.D. in pathology from the Tokyo Medical and Dental University Graduate School for Medicine.

Robert Kavlock, US Environmental Protection Agency, USA

Dr. Robert J. Kavlock is the Deputy Assistant Administrator for Science in US EPA's Office of Research and Development (ORD). He has over 33 years of scientific experience and was previously the Director of the National Center for Computational Toxicology (NCCT) within ORD, a post he occupied since its founding in 2005. The ToxCast program within the NCCT is on the leading edge of the state of the science in computational toxicology. Dr. Kavlock began his career at US EPA in 1977 conducting research on the effects of pesticides on prenatal development and progressed to spending 15 years as the Director of the Reproductive Toxicology Division in ORD. He has spent much of his career working on improving the basis for understanding non-cancer health effects, with the most recent efforts focused on computational toxicology. Computational toxicology promises to transform the conduct of toxicological studies through the blending of advances in modern molecular biology with computational sciences. Dr. Kavlock has published more than 200 scientific papers, 16 book chapters, edited three books, including co-editor of the Global Assessment of the State-of-the-Science of Endocrine Disruptors, and serves on a number of international scientific advisory committees. He is the co-recipient of the US Human Society North American Alternative Award (2008) and ORD's Statesmen of the Year Award (2007), and is past president of the Teratology Society. Dr. Kavlock also serves as a member of the editorial boards of *Environmental Health Perspectives*, the *Journal of Toxicology and Environmental Health*, and *Birth Defects Research Part B: Developmental and Reproductive* Toxicity. Dr. Kavlock received his B.S. in biology and his Ph.D in embryology from the University of Miami.

Yukyung Kim, Ministry of Environment, Republic of Korea

Ms. Yukyung Kim is the Deputy Director of the Chemicals Policy Division at Korea's Ministry of Environment. She was previously the Deputy Director of the Women and Family Policy Affairs Office for the Seoul Metropolitan Government. Ms. Kim received her B.S. from Seoul National University.

Kiyoung Lee, Seoul National University, Republic of Korea

Dr. Kiyoung Lee is a Professor in the Department of Environmental Health at Seoul National University. He previously held Assistant Professor positions at the University of Kentucky, University of California Davis, and Queensland University of Technology in Australia. Dr. Lee is a Certified Industrial Hygienist. He was elected for Board of Directors member of the International Society of Exposure Science in 2012. Dr. Lee is an Academy Fellow of the International Society of Indoor Air Quality and Climate. He has published over 100 peer-reviewed manuscripts in international journals and 50 peer-reviewed manuscripts written in Korean. Dr. Lee received his B.S. and M.P.H. from Seoul National University, his M.S. from the University of Michigan, and his Sc.D. from the Harvard School of Public Health.

Kenneth Lee, Agency for Science, Technology and Research, Singapore

Dr. Kenneth Lee is Senior Director at Singapore's Agency for Science, Technology and Research (A*STAR). His remit is to build a vibrant research and innovation ecosystem, to catalyze and support the growth of industry in Singapore. Dr. Lee's team formulates and drives strategies to (i) build a broad base of industry-relevant R&D capabilities and infrastructure; (ii) create an end-to-end innovation ecosystem by anchoring long-term R&D partnerships with leading multinational corporations, subject matter experts, and public-sector research organisations; and (iii) ensure a pipeline of scientific and technical talent to support industry. Dr. Lee is a passionate game changer and global executive with senior leadership experience in innovation and strategic planning (personal/beauty care, food and nutrition industries). At L'Oréal headquarters in France, where he was Corporate Director of Strategic Foresight from 2001 to 2013, Dr. Lee led multidisciplinary teams tasked with identifying and accelerating new growth opportunities based on nascent science and technology. Through open innovation partnerships with researchers and startup companies worldwide, the teams helped to bring disruptive innovations to

consumers. From 2011 to 2013, he was a member of the industry advisory board of the Synthetic Biology Engineering Research Centre, a US National Science Foundation initiative. He is currently an Independent Board Member and Member of the Investment Committee for New Protein Capital, a seed-stage venture capital fund; and Committee Member of the Genetic Modification Advisory Committee (GMAC) of Singapore since 2014. Dr. Lee received his Ph.D. in cell and molecular biology from the University of Edinburgh.

Steve Lin, Safety and Health Technology Center, Taiwan

Dr. Steve (Yichen) Lin currently serves as Senior Toxicologist for the Safety and Health Technology Center (SAHTECH) in Taiwan. He is currently working on chemical risk assessment, regulatory policy making, and toxicological evaluation of harmful substances. Areas of expertise include general principles and application of toxicology research (including environmental and reproductive toxicology); quality and comparative effectiveness of public health evaluations; risk assessments for environment toxicants and toxicity for newly discovered drugs; preclinical cancer research; and animal models for non-clinical pharmacologic and toxicological studies. He has extensive experience in designing, performing, and analyzing the results of human, non-human, *in vivo*, and *in vitro* experiments. Dr. Lin also has experience in organizing, writing, and presenting research findings for publication and at international conferences, both individually and on research teams. He has a Ph.D. in toxicology/pharmacology, and postdoctoral training in new drug development and public health.

Lit-Hsin Loo, Agency for Science, Technology and Research, Singapore

Dr. Lit-Hsin Loo is a Principal Investigator at the Bioinformatics Institute (BII), A*STAR, Singapore. He is also an adjunct Assistant Professor at the Department of Pharmacology, Yong Loo Lin School of Medicine, National University of Singapore. Dr. Loo is leading an interdisciplinary team of scientists developing *in vitro* and computational models for predicting the toxicity and/or targets of chemical compounds with diverse or unknown structures. His team has developed novel image-based phenotypic profiling methods and tools that led to the first high-throughput and predictive *in vitro* platform for nephrotoxicity prediction. His team is also currently developing predictive models and novel endpoints for pulmonary and hepatic toxicities. Dr. Loo was the recipient of the Award for Excellence in Postdoctoral Research (2010) and the Alfred Gilman Award (2009) by the University of Texas Southwestern (UTSW) Medical Center, and the Doctoral Award in Mathematical Sciences and Engineering (2005) by Drexel University. Dr. Loo was a postdoctoral fellow in the Bauer Center for Genomics Research at Harvard University (2005), and then in the Department of Pharmacology at the UTSW Medical Center, USA (2005- 2010).

Anna Lowit, US Environmental Protection Agency, USA

Dr. Anna B. Lowit received her Ph.D. in environmental toxicology from the University of Tennessee in 1998 where she was a Graduate Fellow in sustainable waste management. Dr. Lowit began her career with US EPA in 1998 with the Office of Pesticide Programs, where she remains today. Dr. Lowit is currently the Senior Science Advisor at the US EPA's Office of Pesticide Programs where she advices senior managers and leads multidisciplinary teams on a variety of cross-cutting topics. She is currently one of the Co-Chairs of the Interagency Coordinating Committee on the Validation of Alternative Methods (ICCVAM). ICCVAM is composed of representatives from 15 US Federal regulatory and research agencies that require, use, generate or disseminate toxicological and safety testing information and whose purpose is to promote and facilitate the 3Rs of toxicity testing (reduce, refine, replace) in regulatory toxicity testing. Dr. Lowit has extensive experience in developing cumulative risk assessments for groups of pesticides which share a common mechanism of toxicity (e.g., organophosphates, *N*-methyl carbamates). She also has interest in the integration of science along multiple lines of evidence

(epidemiology , *in vivo* and *in vitro* experimental toxicology). She has particular interest in improving the use of quantitative approaches in human health risk assessment such as use of meta-analysis in deriving benchmark dose estimates and linking PBPK models with probabilistic exposure models.

Kristan Markey, US Environmental Protection Agency, USA

Mr. Kristan Markey is a chemical data scientist with the US EPA Endocrine Disruptor Screening Program (EDSP) to build network models and database systems to address chemicals that can perturb the estrogen, androgen, and thyroid pathways and currently leads the EDSP systematic literature reviews across thousands of chemicals. He joined US EPA in 2008 as a chemist and program manager of industrial chemicals under the Toxic Substances Control Act (TSCA) in the New Chemicals Program. Under TSCA, he managed problematic chemical risk assessments and regulations including nanomaterials, polyfluorinated substances, and chlorinated paraffins. He has been closely involved with a variety of US and international science and policy initiatives on nanotechnology and sustainability, including co-chairing the Organisation for Economic Co-operation and Development's (OECD) project on the Environmentally Sustainable Use of Manufactured Nanomaterials and serving as the NanoSafety Team Leader at the OECD Working Party on Manufactured Nanomaterials. He previously worked as a research analyst with the Environmental Working Group's (EWG) Toxics Program evaluating a wide range of US chemical policies, led the substance nomenclature and hazard evaluations in the flagship cosmetic safety database on over 8,000 different ingredients across 40,000 cosmetics products, and developed the sunscreen protection and breakdown models. He has also developed science policy analyses and novel IT/data mining tools around diverse issues including nuclear waste and weapons; persistent, bioaccumulative, and toxic (PBT) substances; the Toxics Release Inventory; drinking water; High Production Volume chemicals; and chemical sustainability.

Lidka Maślankiewicz, National Institute for Public Health and the Environment, The Netherlands

Ms. Lidka Maślankiewicz is a Toxicologist, Risk Assessor of industrial chemicals, and Scientific Researcher working at the Dutch National Institute for Public Health and the Environment (RIVM). In 1995, she joined the Risk assessment of New Chemical Substances department and participated in the OECD High Production Volume Chemicals project (SIAM), where she built her experience with QSARs, read-across, and chemical categories. Later she became the OECD HPV Manager. Currently she is managing the OECD IATA Chemical Categories Case Studies Project (implementation of the classical read-across and new methodologies in hazard assessment). She is also involved in the OECD IATA Case Studies Project AOP/Skin sensitization. In addition, she is an expert working for the OECD Task Force Hazard Assessment. Since 2008, she has been responsible for a variety of tasks under the EU REACH regulation (substance evaluations, prioritization and screening). She has successfully organized several toxicology, ecotoxicology, risk assessment, and QSAR trainings in Belgium, Slovakia, Poland, and Bulgaria. She has experience using several *in silico* (Q)SAR models (DEREK, EpiSuite, Meteor), and has started to gain more experience using AOP and IATA. In 2015 she organized an RIVM/IATA Workshop, which gave her co-workers better understanding of IATA and AOP for skin sensitization (based on the OECD Case Studies). She is has been a (co)-author on mostly confidential reports on hazard and risk assessment of industrial chemicals. Ms. Maślankiewicz graduated from the Medical Academy in Warszawa, Poland, Pharmacy Department, and completed her Masters of Science in Toxicology and Ecotoxicology.

Jeff Morris, US Environmental Protection Agency, USA

Dr. Jeff Morris is Deputy Director of the US EPA's Office of Pollution Prevention and Toxics, which regulates chemicals under the Toxic Substances Control Act. He has held a number of positions at US EPA, including acting director of the Office of Science Policy and National Program Director for Nanotechnology Research.

Christine Norman, Health Canada, Canada

Ms. Christine Norman holds a M.Sc. from McMaster University, Hamilton, Ontario. Ms. Norman has previously held leadership roles within Health Canada regulatory programs, including as Associate Director of the Consumer Product Safety program and in various positions within Health Canada's Pest Management Regulatory Agency (PMRA). While at PMRA, Ms. Norman was responsible for human health risk assessments for pesticides being considered for registration in Canada and, in that capacity, she led federal initiatives related to children and environmental exposures. As part of the North American Free Trade Agreement's Technical Working Group on Pesticides, she led many of the US EPA and Health Canada joint reviews of pesticides. Since 2009, Ms. Norman has been the Director of the Existing Substances Risk Assessment Bureau. She also represents the Government of Canada on Organisation for Economic Cooperation and Development (OECD) Existing Chemicals Programme initiatives, is the Branch representative on the WHO Risk Assessment Network and leads risk assessment initiatives under the US/Canada Regulatory Cooperation Council. Ms. Norman is Director Champion for the Safe Environment Directorate's network for scientific staff (SciNet) and for the Directorate's support of the Government of Canada Workplace Charitable Campaign.

Kerry Nugent, National Industrial Chemicals Notification and Assessment Scheme, Australia

Dr. Kerry Nugent is a long term NICNAS employee with 18 years of experience. His original training was in inorganic chemistry and materials science, although he now focuses on toxicology and regulatory science. He has been involved in a range of innovative program developments within NICNAS, most recently being one of the main architects of the IMAP program, for which he has scientific oversight.

Jennifer Orme-Zavaleta, US Environmental Protection Agency, USA

Dr. Jennifer Orme-Zavaleta is Director of the National Exposure Research Laboratory in US EPA's Office of Research and Development. Dr. Orme-Zavaleta has been with US EPA for more than 30 years, working in the areas of human health and ecological research, risk assessment, policy and regulation development, strategic planning, and program implementation. The focus of her experience includes the evaluation of risks to human and ecosystem health, and the influence of environmental change on human health in response to a variety of stressors including synthetic organic and inorganic chemicals, radionuclides, microorganisms, and vector-borne disease. As Director of US EPA's National Exposure Research Laboratory, she is responsible for leading the development and application of exposure science to support the Agency's research programs in Chemical Safety for Sustainability, Safe and Sustainable Water Resources, Sustainable and Health Communities, and Air Climate and Energy that support Agency decision-making. She received a B.A. from Ohio Wesleyan University and a M.S. from Miami University in zoology, and a Ph.D. in wildlife science and public health from Oregon State University.

Mike Rasenberg, European Chemicals Agency, European Union

Mr. Mike Rasenberg is Head of the Computational Assessment and Dissemination Unit at the European Chemicals Agency (ECHA). Mr. Rasenberg is a Chemist by education and has over 14 years of professional experience working in the field of chemical regulatory affairs with both governmental bodies and enterprises. From 2009–2011, Mr. Rasenberg was the Contingency Manager at ECHA having a coordinating role for the first REACH Registration and the CLP notification deadlines. Before this, Mike was member of the REACH and GHS implementation teams of DuPont de Nemours, with different responsibilities, including pre-registration. During this time, Mr. Rasenberg was also active in CEFIC. Before joining DuPont, he took part in the REACH preparation projects by the European Commission (the REACH Implementation Projects - RIPs) as employee of the European Chemicals Bureau (DG JRC). He was involved in the development of IUCLID 5 and REACH-IT and was (co-) project leader for the

development of the Guidance document for Data Sharing and the Guidance on Substance Identity. His first relevant working experience was with Royal Haskoning as a consultant chemicals management.

Mary Ross, US Environmental Protection Agency, USA

Dr. Mary Ross is the Deputy Director for Management for the US EPA's National Center for Environmental Assessment (NCEA). She has worked in NCEA since 2006, serving initially as Branch Chief for the group in NCEA that prepares Integrated Science Assessments (ISA) that serve as the scientific foundation for decisions on the national ambient air quality standards (NAAQS). Previously, Dr. Ross was in US EPA's Office of Air Quality Planning and Standards, where she served as the Team Leader for the review of the NAAQS for particulate matter. Dr. Ross has a Ph.D. in public health from the University of Illinois at Chicago, and holds Bachelor's and Master's degrees in biology from the University of Notre Dame and the College of William and Mary, respectively.

Keith Sappington, US Environmental Protection Agency, USA

Mr. Keith Sappington has 30 years of experience conducting applied environmental research to support human and ecological risk assessments and water quality criteria development. At the US EPA, Mr. Sappington serves as a Senior Science Advisor in the Office of Pesticide Programs (OPP) where he conducts ecological risk of assessments of pesticides. His areas of expertise include aquatic toxicology, bioaccumulation modeling, contaminated sediment testing and assessment, and assessing risks of pesticides to insect pollinators. Mr. Sappington also served for ten years in USEPA's Office of Research and Development and the Office of Water where he managed ecotoxicological research related to methyl mercury and contaminated sediments, developed guidance for assessing metals bioaccumulation by aquatic organisms, and revised aquatic life and human health water quality criteria guidelines. Prior to his employment by the US EPA, Mr. Sappington served as a Senior Analyst at Abt Associates, Inc., where he conducted risk assessments and related analyses to support various US EPA regulatory programs. At the State of Maryland Department of Environment, Mr. Sappington supported whole effluent toxicity testing program for municipal waste water treatment plants and developed water quality criteria. In addition to his regulatory and consulting experience, Mr. Sappington conducted four years of applied laboratory and field ecotoxicological research at Virginia Tech and the University of North Texas. Mr. Sappington holds a M.S. degree in zoology and a B.S. degree in biology from Virginia Tech. He has authored numerous book chapters, peer reviewed articles, and government reports related to ecological risk assessment. Mr. Sappington has presented his work at various national and international workshops and scientific peer review meetings.

Jung Kuan Seo, Ministry of Environment, Republic of Korea

Mr. Jung Kuan Seo is a Senior Researcher at the National Institute of Environmental Research in Korea's Ministry of Environment. He is currently working on developing guidance for risk assessments of chemicals and products; Korean child-specific exposure factors; and aggregated risk assessments of environment hazards. He served as a member of the Chemical Review Committee at the United Nations Environment Programme (UNEP) Rotterdam Convention, and on the National Academy of Agricultural Science committee for developing an ADI for pesticides.

Tomasz Sobański, European Chemicals Agency, European Union

Dr. Tomasz Sobański is a Scientific Officer at the Computational Assessment and Dissemination Unit of the European Chemicals Agency (ECHA).

Gina Solomon, California Environmental Protection Agency, USA

Dr. Gina Solomon is the Deputy Secretary for Science and Health at the California Environmental Protection Agency (CalEPA) and a Clinical Professor of Medicine at the University of California, San

Francisco (UCSF). Prior to coming to CalEPA in 2012, she was a senior scientist at the Natural Resources Defense Council, the director of the occupational and environmental medicine residency program at UCSF, and the co-director of the UCSF Pediatric Environmental Health Specialty Unit. Dr. Solomon's work has spanned a wide array of areas, including children's environmental health, reproductive toxicity, cumulative impacts, and evaluating the use of novel data streams to screen chemicals for toxicity. She has also done work in exposure science for air pollutants, pesticides, mold, and metals in soil and on the health effects of climate change. She was involved in the aftermath of Hurricane Katrina, the Gulf oil spill, and the Chevron Richmond explosion and fire, and is currently working to improve refinery process safety in California. Dr. Solomon serves on both the US EPA's Science Advisory Board and Board of Scientific Counselors, where she co-chairs the Subcommittee on Chemical Safety for Sustainability and Human Health Risk Assessment. She also serves on the NRC's Board on Environmental Studies in Toxicology and previously served on the Committees on Toxicity Testing in the 21st Century and Exposure Science in the 21st Century, as well as on the National Toxicology Program's Board of Scientific Counselors. Dr. Solomon received her bachelor's degree from Brown University, her M.D. from Yale, and did her M.P.H. and her residency and fellowship training in internal medicine and occupational and environmental medicine at Harvard.

Jose V. Tarazona, European Food Safety Authority, European Union

Dr. Jose V. Tarazona is the Head of the Pesticides Unit at the European Food Safety Authority (EFSA). He is a doctor of veterinary medicine, with a Ph.D. in toxicology. From 1982 to 2009 Dr. Tarazona worked at the Spanish National Institute for Agriculture and Food Research and Technology (INIA), serving as Head of the Division of Environmental Toxicology and Director of the Department of the Environment. He has been involved in the scientific advisory board of the European Union since 1992; he was a member of the CSTE, vice-chair of the Scientific Committee on Toxicity, Ecotoxicity and the Environment (CSTEE), and vice-chair of the Scientific Committee on Health and Environmental Risks (SCHER). He has been a member of the UNEP POPs Review Committee and external expert-consultant for different European bodies, OECD, WHO and UN, chairing OECD and UN Expert Groups within the GHS strategy. Before moving to EFSA, from 2009 to 2013 he was Chair of the Committee for Risk Assessment and Scientific Chair of the Evaluation Directorate at the European Chemicals Agency (ECHA).

Russell Thomas, US Environmental Protection Agency, USA

Dr. Russell Thomas is the director of the National Center for Computational Toxicology at the US EPA. He has been at US EPA since 2013. The Center is researching new, more efficient ways to evaluate the safety of chemicals, particularly in assessing chemicals for human health effects. Prior to coming to the US EPA, Dr. Thomas was the director of the Institute for Chemical Safety Sciences at The Hamner Institutes for Health Sciences and worked in the biotech and biopharmaceutical industry. Dr. Thomas received a B.A. in chemistry from Tabor College, an M.S. in radiation ecology and health physics from Colorado State University, and a Ph.D. in toxicology also at Colorado State. Following his doctoral studies, Dr. Thomas performed postdoctoral research in molecular biology and genomics at the McArdle Cancer Research Laboratory at the University of Wisconsin.

John J. Vandenberg, US Environmental Protection Agency, USA

Dr. John J. Vandenberg is National Program Director of the Human Health Risk Assessment program, and Director of the Research Triangle Park Division of the National Center for Environmental Assessment (NCEA), at the US EPA. He has over 30 years of experience in environmental health risk assessment and is responsible for leadership, planning and oversight of US EPA's Integrated Science Assessments for the major (criteria) air pollutants and Integrated Risk Information System (IRIS) assessments for high priority hazardous air pollutants, and for development of new risk assessment methodologies. In 2006, he was

elected a Fellow of the Society for Risk Analysis and in 2013 he was recipient of the ORD Statesmanship Award. He is an adjunct professor at the Nicholas School of the Environment at Duke University and received his B.A from the College of Wooster, Ohio, and a M.S. and Ph.D. from Duke University in biophysical ecology.

Maurice Whelan, Joint Research Centre, European Union

Dr. Maurice Whelan is head of the Chemical Safety and Alternative Methods Unit of the Directorate for Health, Consumers and Reference Materials of the European Commission's Joint Research Centre (JRC), based in Ispra, Italy. He also heads the European Union Reference Laboratory for Alternatives to Animal Testing (EURL ECVAM) of the JRC, established under EU Directive 2010/63 on the protection of animals used for scientific purposes to build on the 20 years of activities of ECVAM, the European Centre for the Validation of Alternative Methods. Priorities of his work include the development, validation and promotion of alternative approaches to animal testing both for regulatory safety assessment of chemicals (inc. nanomaterials) and for applications in biomedical research. Whelan is the EU co-chair of the OECD Advisory Group on Molecular Screening and Toxicogenomics that is responsible for the OECD programme on Adverse Outcome Pathways, and he is a member of the Steering Committee of the European Partnership for Alternative Approaches to Animal Testing (EPAA). He received his Ph.D. in 1993 in mechanical engineering (design of orthopaedic knee prostheses) by the University of Limerick (Ireland) and holds an external appointment of visiting Professor of Bioengineering at the University of Liverpool (UK).